

Application/Control Number : 09/423,544  
Art Unit 2834 - Examiner: LAM, T  
October 19, 2001  
Page 10

Clean version of claims 24, 28, 29, 32, 35 and 40

C 24. A device for transmitting motion between the rotor of a synchronous permanent-magnet motor and the working part, comprising at least two motion transmission couplings which mutually cooperate in a kinematic series, each coupling being constituted by at least one driving element which is eccentric with respect to the rotation axis and is rigidly coupled to a component of the motion transmission system and by at least one driven element, which is also eccentric with respect to the rotation axis and is rigidly coupled to the component arranged kinematically after the preceding one, the angle covered by the elements of each coupling being, as a whole, less than a round angle, the intermediate components of the kinematic transmission having both a driven element and a driving element for receiving the motion from a preceding one and transmitting it to a subsequent one, wherein said motion transmission couplings are toothed, a first one of said couplings being constituted by two first teeth which are rigidly coupled to the rotor of a motor in diametrically opposite positions, and of two second teeth which are rigidly coupled, likewise in diametrically opposite positions, to an annular element which can rotate freely with respect to said rotor, a second one of said couplings being composed of said second teeth and of two third teeth which are also diametrically opposite and are rigidly coupled to the working part.

2 28. The device according to claim 24, comprising four couplings which mutually cooperate in a kinematic series, a first one of said couplings being constituted by a first tooth which is rigidly coupled to the free shaft of a motor and of a second tooth which is rigidly coupled to an annular element which can rotate freely with respect to said free shaft, a second one of said couplings being composed of said second tooth and of a third tooth which is rigidly coupled to the working part, a third one of said couplings being composed of a fourth tooth which is rigidly coupled to the rotor of said motor and of a fifth tooth which is rigidly coupled to an annular element which moves freely with respect to said free axis, a fourth one of said couplings being

25

C

Application/Control Number : 09/423,544  
Art Unit: 2834 - Examiner: LAM, T  
October 19, 2001  
Page 11

*C1  
conced.*  
composed of said fifth tooth and of a sixth tooth which is rigidly coupled to said free shaft. <sup>7</sup>

<sup>1</sup>  
~~28~~. The device according to claim ~~24~~, wherein said motion transmission couplings are arranged in an axial hollow body which is rigidly coupled to said working part and is closed by a cover.

---

*C2*  
<sup>12</sup> ~~32~~. The device according to claim ~~24~~, wherein said motion transmission couplings comprise a first tooth which is rigidly coupled to an axial tang which protrudes from a tip flange of said rotor, said annular element from which said second tooth protrudes being arranged so as to surround said shaft and so that it can rotate freely, the extension of said second tooth being such that it can make contact with said first tooth and with said third tooth which protrudes from another annular element which is rigidly coupled to said shaft.

---

*C3*  
<sup>15</sup> ~~35~~. The device according to claim ~~24~~, wherein said couplings are arranged in an axial hollow body which is rigidly coupled to said working part and is closed hermetically by a cover.

---

*C4*  
<sup>18</sup> ~~48~~. The device according to claim ~~24~~, wherein at least one of said teeth is composed of an internal supporting part which is made of rigid plastics and of two mutually opposite external parts which are overmolded on the internal part, are made of elastomeric material, and form the surfaces for contact with the other teeth.

---

24

C